

FIGURE 1

ATMSEQ-ORF

ATGAGTCTAGTACTTAATGATCTGCTTATCTGCTGCCGTCAACTAGAACATGATAGAGCTACA
GAACGAAAGAAAGAAGTTGAGAAAATTTAAGCGCCTGATTTCGAGATCCTGAAACAATTAAACA
TCTAGATCGGCATTTCAGATTCCAAACAAGGAAAATATTTGAATTGGGATGCTGTTTTTAGATT
TTACAGAAATATATTCAGAAAGAAACAGAATGTCTGAGAATAGCAAAACCAAATGTATCAGC
CTCAACACAAGCCTCCAGGCAGAAAAAGATGCAGGAAATCAGTAGTTTGGTCAAATACTTCAT
CAAATGTGCAACAGAAAGAGCACCTAGGCTAAAATGTCAAGAACTCTTAAATTATATCATGGA
TACAGTGAAAGATTTCATCTAATGGTGCTATTTACGGAGCTGATTGTAGCAACATACTACTCAA
AGACATTCTTTCTGTGAGAAAAATACTGGTGTGAAATATCTCAGCAACAGTGGTTAGAATTGTT
CTCTGTGTACTTCAGGCTCTATCTGAAACCTTCACAAGATGTTTCATAGAGTTTTAGTGGCTAGA
ATAATTCATGCTGTTACCAAAGGATGCTGTTCTCAGACTGACGGATTAAATTCCAAATTTTTGG
ACTTTTTTTCCAAGGCTATTCAGTGTGCGAGACAAGAAAAGAGCTCTTCAGGTCTAAATCATAT
CTTAGCAGCTCTTACTATCTTCCTCAAGACTTTGGCTGTCAACTTTTGAATTCGAGTGTGTGAA
TTAGGAGATGAAATCTTCCCCTTTGCTTTATATTTGGACTCAACATAGGCTTAATGATTCTT
TAAAAGAAGTCATTATTGAATTATTTCAACTGCAAATTTATATCCATCATCCGAAAGGAGCCA
AAACCCAAGAAAAAGGTGCTTATGAATCAACAAAATGGAGAAGTATTTTATACAACTTATATG
ATCTGCTAGTGAATGAGATAAGTCATATAGGAAGTAGAGGAAAGTATTCTTCAGGATTTTCGTA
ATATTGCCGTCAAAGAAAAATTTGATTGAATTGATGGCAGATATCTGTCACCAGGTTTTTAATG
AAGATACCAGATCCTTGGAGATTTCTCAATCTTACACTACTACACAAAGAGAATCTAGTGATT
ACAGTGTCCCTTGCAAAAGGAAGAAAAATAGAACTAGGCTGGGAAGTAATAAAAAGATCACCT
CAGAAGTCACAGAATGATTTTGATCTTTGTCCTTGGCTACAGATTGCAACCCAATTAATATCA
AAGTATCTCTGCAAGTTTACCTAAGTGTGAGCTGTCTCCATTACTGATGATACTATCTCAGCTTC
TACCCCAACAGCGACATGGGGAACGTACACCATATGTGTTACGATGCCTTACGGAAGTTGCAT
TGTGTCAAGACAAGAGGTCAAACCTAGAAAGCTCACAAAAGTCAGATTTATTA AAACTCTGGA
ATAAAATTTGGTGTATTACCTTTCTGTTGATAAGTTCTGAGCAAATACAAGCTGAAAACCTTG
GCTTACTTGGAGCCATAATTCAGGGTAGTTTAGTTGAGGTTGACAGAGAATTCTGGAAGTTAT
TTACTGGGTCAGCCTGCAGACCTTCATGTCCTGCAGTATGCTGTTTGACTTTGGCACTGACCAC
CAGTATAGTTCCAGGAACGGTAAAAATGGGAATAGAGCAAAATATGTGTGAAGTAAATAGAA
GCTTTTCTTTAAAGGAATCAATAATGAAATGGCTCTTATCTATCAGTTAGAGGGTGACTTAGA
AAATAGCACAGAAGTGCCTCCAATCTTCACAGTAATTTTCTCATCTTGTACTGGAGAAAAAT
CTTGTGAGTCTCACTATGAAAACTGTAAAGCTGCAATGAATTTTTTCCAAAGCGTGCCAGAA
TGTGAACACCACCAAAAAAGATAAAGAAGAACTTTTATTCTCAGAAGTAGAAGAACTATTTCTT
CAGACAACTTTTGACAAGATGGACTTTTTTAACCATTTGTGAGAGAATGTGGTATAGAAAAGCAC
CAGTCCAGTATTGGCTTCTCTGTCCACCAGAATCTCAAGGAATCACTGGATCGCTGTCTTCTGG
GATTATCAGAACAGCTTCTGAATAATTACTCATCTGAGATTACAAATTCAGAACTCTTGTCCG
GTGTTACGTCCTTTTGGTGGGTGTCCTTGGCTGTACTGTTACATGGGTGTAATAGCTGAAGAG
GAAGCATATAAGTCAGAATTATCCAGAAAGCCAAGTCTCTAATGCAATGTGCAGGAGAAAG
TATCACTCTGTTTAAAAATAAGACAAATGAGGAATTCAGAATTGGTTCCTTGAGAAATATGAT
GCAGCTATGTACAGTTGCTTGAGCAACTGTACCAAGAAGAGTCCAAATAAGATTGCATCTGG
CTTTTCTCTGCGATTGTTAACATCAAAGCTAATGAATGACATTGCAGATATTTGTAAAAGTTTA
GCATCCTTCATCAAAAAGCCATTTGACCGTGGAAGTAGAATCAATGGAAGATGATACTAAT
GGAAATCTAATGGAGGTGGAGGATCAGTCATCCATGAATCTATTTAACGATTACCTGATAGT
AGTGTTAGTGATGCAAACGAACCTGGAGAGAGCCAAAGTACCATAGGTGCCATTAATCCTTTA
GCTGAAGAATATCTGTCAAAGCAAGATCTACTTTTCTTAGACATGCTCAAGTCTTGTGTTTGT
GTGTAATACTGCTCAGACCAATACTGTGTCCTTTAGGGCAGCTGATATTCGGAGGAAATTGTT
AATGTTAATTGATTCTAGCACGCTAGAACCTACCAAATCCCTCCACCTGCATATGTATCTAATG
CTTTTAAAGGAGCTTCCTGGAGAAGAGTACCCCTTGCCAATGGAAGATGTTCTTGAACCTCTG
AAACCACTATCCAATGTGTGTTCTTTGTATCGTCGTGACCAAGATGTTTGTAAAACCTATTTTAA
ACCATGTCCTTCATGTAGTGAAAAACCTAGGTCAAAGCAATATGGACTCTGAGAACACAAGGG
ATGCTCAAGGACAGTTTCTTACAGTAATTGGAGCATTTTGGCATCTAACAAAGGAGAGGAAAT

ATATATTCTCTGTAAGAATGGCCCTAGTAAATTGCCTTAAAACCTTTGCTTGAGGCTGATCCTTA
TTCAAAATGGGCCATTCTTAATGTAATGGGAAAAGACTTTCCTGTAAATGAAGTATTTACACA
ATTTCTTGCTGACAATCATCACCAAGTTCGCATGTTGGCTGCAGAGTCAATCAATAGATTGTTT
CAGGACACGAAGGGAGATTCTTCCAGGTTACTGAAAGCACTTCCCTTTGAAGCTTCAGCAAACA
GCTTTTGAAAATGCATACTTGAAAGCTCAGGAAGGAATGAGAGAAATGTCCCATAGTGCTGAG
AACCCCTGAAACTTTGGATGAAATTTATAATAGAAAATCTGTTTTACTGACGTTGATAGCTGTG
GTTTTATCCTGTAGCCCTATCTGCGAAAAACAGGCTTTGTTTGGCCCTGTGTAAATCTGTGAAAG
AGAATGGATTAGAACCTCACCTTGTGAAAAAGGTTTTAGAGAAAAGTTTCTGAAACTTTTGGAT
ATAGACGTTTAGAAGACTTTATGGCATCTCATTTAGATTATCTGGTTTTGGAATGGCTAAATCT
TCAAGATACTGAATACAACCTTATCTCTTTTCCCTTTTATTTTATTAACTACACAAATATTGAG
GATTTCTATAGATCTTGTATAAGGTTTTGATTCCACATCTGGTGATTAGAAGTCATTTTGATG
AGGTGAAGTCCATTGCTAATCAGATTCAAGAGGACTGGAAGTCTTCTAACAGACTGCTTTC
CAAAGATTCTTGTAATATTCTTCCCTATTTTGCCTATGAGGGTACCAGAGACAGTGGGATGGC
ACAGCAAAGAGAGACTGCTACCAAGGTCTATGATATGCTTAAAAGTGAAAACCTTATTGGGAA
AACAGATTGATCACTTATTCATTAGTAATTTACCAGAGATTGTGGTGGAGTTATTGATGACGTT
ACATGAGCCAGCAAATTCTAGTGCCAGTCAGAGCACTGACCTCTGTGACTTTTCAGGGGATTT
GGATCCTGCTCCTAATCCACCTCATTTTCCATCGCATGTGATTAAAGCAACATTTGCCCTATATC
AGCAATTGTCAATAAACCAAGTTAAAAAGCATTTTAGAAATTCCTTTCCAAAAGCCCTGATTCC
TATCAGAAAAATCTTCTTGCCATATGTGAGCAAGCAGCTGAAACAAATAATGTTTATAAGAAG
CACAGAATTCTTAAAAATATATCACCTGTTTGTTAGTTTATTACTGAAAGATATAAAAAAGTGGCT
TAGGAGGAGCTTGGGCCTTTGTTCTTCGAGACGTTATTTATACTTTGATTCACTATATCAACCA
AAGGCCTTCTTGATCATGGATGTGTCATTACGTAGCTTCTCCCTTTGTTGTGACTTATTAAGTC
AGGTTTGCCAGACAGCCGTGACTTACTGTAAGGATGCTCTAGAAAACCATCTTCATGTTATTGT
TGGTACACTTATACCCCTTGTGTATGAGCAGGTGGAGGTTTCAGAAACAGGTATTGGACTTGT
GAAATACTTAGTGATAGATAACAAGGATAATGAAAACCTCTATATCACGATTAAGCTTTTAGA
TCCTTTTCCCTGACCATGTTGTTTTTAAGGATTTGCGTATTACTCAGCAAAAAATCAAATACAGT
AGAGGACCCTTTTCACTCTTGAGAGGAAATTAACCATTTTCTCTCAGTAAGTGTTTATGATGCAC
TTCCATTGACAAGACTTGAAGGACTAAAGGATCTTCGAAGACAACCTGGAACCTACATAAAGATC
AGATGGTGGACATTATGAGAGCTTCTCAGGATAATCCGCAAGATGGGATTATGGTGAAACTAG
TTGTCAATTTGTTGCAGTTATCCAAGATGGCAATAAACCACACTGGTGAAAAAGAAGTTCTAG
AGGCTGTTGGAAGCTGCTTGGGAGAAGTGGGTCTATAGATTTCTCTACCATAGCTATACAAC
ATAGTAAAGATGCATCTTATACCAAGGCCCTTAAGTTATTTGAAGATAAAGAAGCTTCAGTGGA
CCTTCATAATGCTGACCTACCTGAATAACACACTGGTAGAAGATTGTGTCAAAGTTTCGATCAG
CAGCTGTTACCTGTTTGA AAAACATTTTAGCCACAAAGACTGGACATAGTTTCTGGGAGATTT
ATAAGATGACAACAGATCCAATGCTGGCCTATCTACAGCCTTTTAGAACATCAAGAAAAAAGT
TTTTAGAAGTACCCAGATTTGACAAAGAAAACCTTTTGAAGGCCTGGATGATATAAAATCTGT
GGATTCTCTAAGTGAAAATCATGACATTTGGATAAAGACACTGACTTGTGCTTTTTTTGGACA
GTGGAGGCACAAAATGTGAAATTCTTCAATTATTAAGCCAATGTGTGAAGTGAAAACCTGACT
TTTGTGAGACTGTACTTCCATACTTGATTGATGATATTTTACTCCAAGATACAAATGAATCATG
GAGAAATCTGCTTTCTACACATGTTTCAGGGATTTTTACCAGCTGTCTTCGACACTTCTCGCAA
ACGAGCCGATCCACAACCCCTGCAAACCTGGATTTCAGAGTCAGAGCACTTTTTCCGATGCTGT
TTGGATAAAAAATCACAAGAACAATGCTTGTGTTGTGGACTACATGAGAAGACAAAAGAG
ACCTTCTTCAGGAACAATTTTTAATGATGCTTTCTGGCTGGATTTAAATTATCTAGAAGTTGCC
AAGGTAGCTCAGTCTTGTGCTGCTCACTTTACAGCTTTACTCTATGCAGAAATCTATGCAGATA
AGAAAAGTATGGATGATCAAGAGAAAAGAAGTCTTGCAATTGAAGAAGGAAGCCAGAGTACA
ACTATTTCTAGCTTGAGTGAAAAAAGTAAAGAAGAACTGGAATAAGTTTACAGGATCTTCTC
TTAGAAATCTACAGAAGTATAGGGGAGCCAGATAGTTTGTATGGCTGTGGTGGAGGGAAGAT
GTTACAACCCATTACTAGACTACGAACATATGAACACGAAGCAATGTGGGGCAAAGCCCTAGT
AACATATGACCTCGAAACAGCAATCCCTCATCAACACGCCAGGCAGGAATCATTAGGCCTT
GCAGAATTTGGGACTCTGCCATATCTTTCCGTCTATTTAAAAGGATTGGATTATGAAAATAAA
GACTGGTGTCTGAACTAGAAGAAGTTCATTACCAAGCAGCATGGAGGAATATGCAGTGGGA
CCATTGCACCTCCGTCAGCAAAGAAGTGAAGGAACCAAGTTACCATGAATCATTGTACAATGC
TCTACAATCTCTAAGAGACAGAGAATTCTTACATTTTATGAAAGTCTCAAATATGCCAGAGT
AAAAGAAGTGGAAGAGATGTGTAAGCGCAGCCTTGAGTCTGTGTATTGCTCTATCCCACACT

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2015. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

TAGCAGGTTGCAGGCCATTGGAGAGCTGGAAAGCATTGGGGAGCTTTTCTCAAGATCAGTCAC
ACATAGACAACCTCTCTGAAGTATATATTAAGTGGCAGAAACACTCCCAGCTTCTCAAGGACAG
TGATTTTATGTTTTTCAGGAGCCTATCATGGCTCTACGCACAGTCATTTTGGAGATCCTGATGGAA
AAGGAAATGGACAACTCACAAAGAGAATGTATTAAGGACATTCTCACCAAACACCTTGTA
ACTCTCTATACTGGCCAGAACTTTCAAGAACAACCTCAGCTCCCTGAAAGGGCAATATTTCAAAT
TAAACAGTACAATTCAGTTAGCTGTGGAGTCTCTGAGTGGCAGCTGGAAGAAGCACAAAGTATT
CTGGGCAAAAAAGGAGCAGAGTCTTGCCCTGAGTATTCTCAAGCAAATGATCAAGAAGTTGG
ATGCCAGCTGTGCAGCGAACAATCCCAGCCTAAAACCTTACATACACAGAATGTCTGAGGGTTT
GTGGCAACTGGTTAGCAGAAACGTGCTTAGAAAAATCCTGCGGTCATCATGCAGACCTATCTAG
AAAAGGCAGTAGAAGTTGCTGGAAATTATGATGGAGAAAGTAGTGATGAGCTAAGAAATGGA
AAAATGAAGGCATTTCTCTCATTAGCCCGGTTTTTCAGATACTCAATACCAAAGAATTGAAAAC
TACATGAAATCATCGGAATTTGAAAACAAGCAAGCTCTCCTGAAAAGAGCCAAAGAGGAAGT
AGGTCTCCTTAGGGAACATAAAATTCAGACAAACAGATACACAGTAAAGGTTTCAGCGAGAGC
TGGAGTTGGATGAATTAGCCCTGCGTGCAGTGAAGAGGATCGTAAACGCTTCTTATGTAAAG
CAGTTGAAAATTATATCAACTGCTTATTAAGTGGAGAAGAACATGATATGTGGGTATTCCGGC
TTTGTTCCTCTGGCTTGAAAATTCTGGAGTTTCTGAAGTCAATGGCATGATGAAGAGAGACG
GAATGAAGATTCCAACATATAAAATTTTGCCTCTTATGTACCAATTGGCTGCTAGAATGGGGA
CCAAGATGATGGGAGGCCTAGGATTTTCATGAAGTCTCAATAATCTAATCTCTAGAATTTCAA
TGGATCACCCCATCACACTTTGTTTATTATACTGGCCTTAGCAAATGCAAACAGAGATGAATT
TCTGACTAAACCAGAGGTAGCCAGAAGAAGCAGAATAACTAAAAATGTGCCTAAACAAAGCT
CTCAGCTTGATGAGGATCGAACAGAGGCTGCAAATAGAATAATATGTACTATCAGAAGTAGG
AGACCTCAGATGGTCAGAAAGTGTGAGGCACTTTGTGATGCTTATATTATATTAGCAAACCTTA
GATGCCACTCAGTGGAAGACTCAGAGAAAAGGCATAAATATTCCAGCAGACCAGCCAATTAC
TAACTTAAAGAAATTTAGAAGATGTTGTTGTCCCTACTATGGAAATTAAGGTGGACCACACAGG
AGAATATGGAAATCTGGTGACTATACAGTCATTTAAAGCAGAATTTTCGCTTAGCAGGAGGTGT
AAATTTACCAAAAATAATAGATTGTGTAGGTTCCGATGGCAAGGAGAGGAGACAGCTTGTTA
AGGGCCGTGATGACCTGAGACAAGATGCTGTCTATGCAACAGGTCTTCCAGATGTGTAATACAT
TACTGCAGAGAAACACGGAAACTAGGAAGAGGAAATTAATCTGTACTTATAAGGTGGTTT
CCCTCTCTCAGCGAAGTGGTGTCTTGAATGGTGCACAGGAACTGTCCCCATTGGTGAATTTCT
TGTTAACAATGAAGATGGTGCTCATAAAAGATACAGGCCAAATGATTTTCAGTGCCTTTTCAGTG
CCAAAAGAAAATGATGGAGGTGCAAAAAAGTCTTTTGAAGAGAAAATATGAAGTCTTCATGG
ATGTTTGCCAAAATTTTCAACCAGTTTTCGGTTACTTCTGCATGGAAAAATTTCTTGGATCCAGC
TATTTGGTTTGAGAAGCGATTGGCTTATACGCGCAGTGTAGCTACTTCTTCTATTGTTGGTTAC
ATACTTGGACTTGGTGATAGACATGTACAGAATATCTTGATAAATGAGCAGTCAGCAGAACTT
GTACATATAGATCTAGGTGTTGCTTTTGAACAGGGCAAAATCCTTCTACTCCTGAGACAGTTT
CTTTAGACTCACCGAGATATTGTGGATGGCATGGGCATTACGGGTGTTGAAGGTGTCTTCA
GAAGATGCTGTGAGAAAACCATGGAAGTGATGAGAAACTCTCAGGAAACTCTGTTAACCATT
GTAGAGGTCTTCTATATGATCCACTCTTTGACTGGACCATGAATCCTTTGAAAGCTTTGTATT
TACAGCAGAGGCCGGAAGATGAAACTGAGCTTCACCCTACTCTGAATGCAGATGACCAAGAA
TGCAAACGAAATCTCAGTGATATTGACCAGAGTTTCAACAAAGTAGCTGAACGTGTCTTAATG
AGACTACAAGAGAACTGAAAGGAGTGGAAGAAGGCACTGTGCTCAGTGTTGGTGGACAAGT
GAATTTGCTCATACAGCAGGCCATAGACCCCAAAAATCTCAGCCGACTTTTCCCAGGATGGAA
AGCTTGGGTGTGA